



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/729,679      | 12/05/2003  | Kenneth M. Sprouse   | 7784-000644         | 3173             |

27572 7590 08/29/2005

HARNESSE, DICKEY & PIERCE, P.L.C.  
P.O. BOX 828  
BLOOMFIELD HILLS, MI 48303

EXAMINER

KOCZO JR, MICHAEL

ART UNIT PAPER NUMBER

3746

DATE MAILED: 08/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/729,679

Applicant(s)

SPOUSE ET AL.

Examiner

Michael Koczo, Jr.

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 and 26-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12, 13, 15-17 and 22-25 is/are rejected.
- 7) ☒ Claim(s) 14 and 18-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12-05-03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION*****Election/Restrictions***

Applicant's election with traverse of the group II invention in the reply filed on July 20, 2005 is acknowledged. The traversal is on the ground(s) that examining all of the claims would not impose a significant burden on the examiner. This is not found persuasive. It is pointed out that, contrary to what applicant suggests, the examination burden is not limited exclusively to a prior art search but also includes the effort required to apply the art by making and discussing all appropriate grounds of rejection. Multiple inventions, such as those in the present application, normally require additional reference material and further discussion for each additional invention examined. Concurrent examination of multiple inventions would thus typically involve a significant burden even if all searches were coextensive. The requirement is still deemed proper and is therefore made FINAL.

Claims 1 to 11 and 26 to 34 therefore stand withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions, there being no allowable generic or linking claim.

***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: there is no basis in the specification for "aperture" of claim 13 and the

Art Unit: 3746

structure of claim 20. Note that the specification in paragraph 51 recites “a half angle  $\alpha$  of about 2 to about 20 degrees.”

### ***Claim Objections***

The specification and claims are objected to for referring to feature 102 as a “splash plate”. A “plate” is defined as a thin piece of material. As seen in figure 8, face 102 is formed by a relatively thick piece of material.

### ***Claim Rejections - 35 USC § 103***

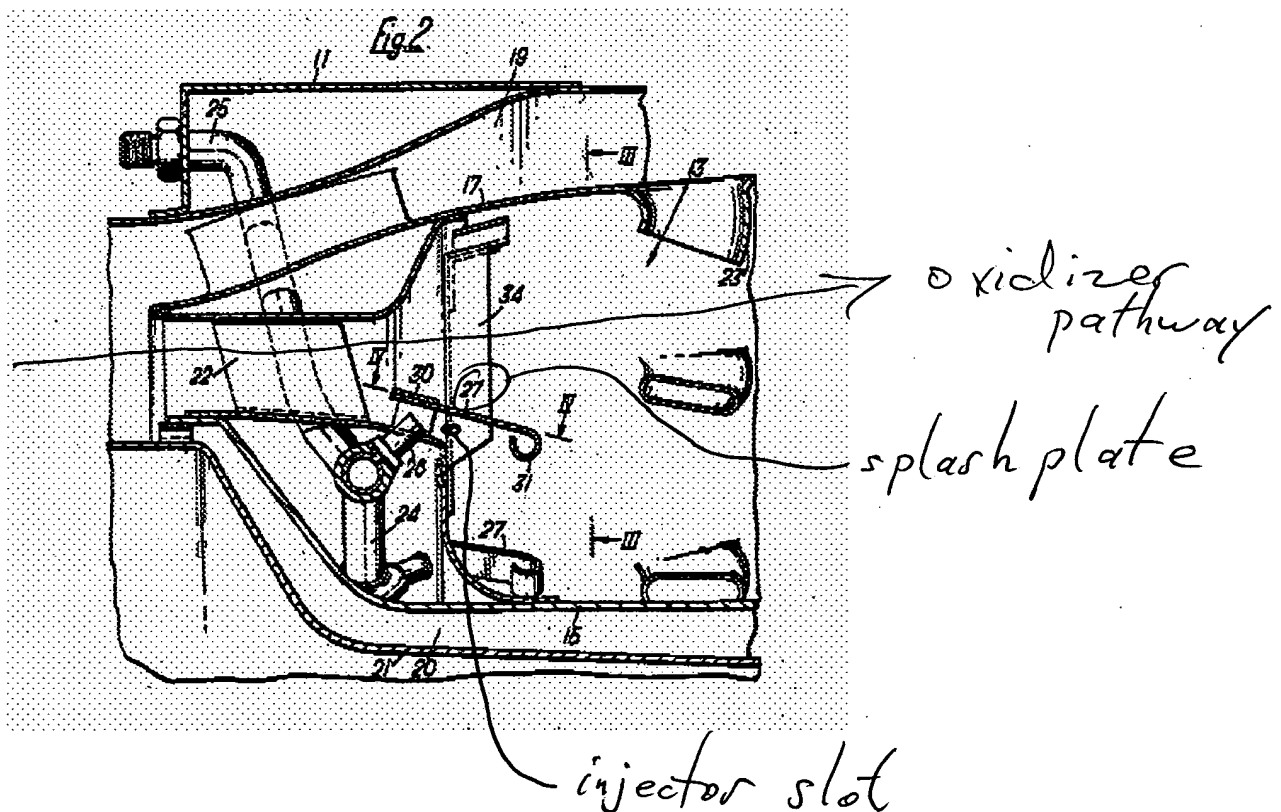
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12, 13, 15, 16, 17, 22, 23, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlisle in view of Amann. Carlisle discloses the invention substantially as claimed. However, Carlisle does not disclose a preheat section to heat the oxidizer. Amann discloses that it is known to use a regenerator 7 to preheat the oxidizer in order to recover energy which would otherwise be wasted. In view of this teaching, it would have been obvious to provide the gas turbine of Carlisle with a recuperator for heating the oxidizer. Figure 2 of Carlisle is reproduced below with the relevant portions labeled with the corresponding claim elements. Regarding claims 23 to 25, these claims merely recite the intended use of the injector

Art Unit: 3746

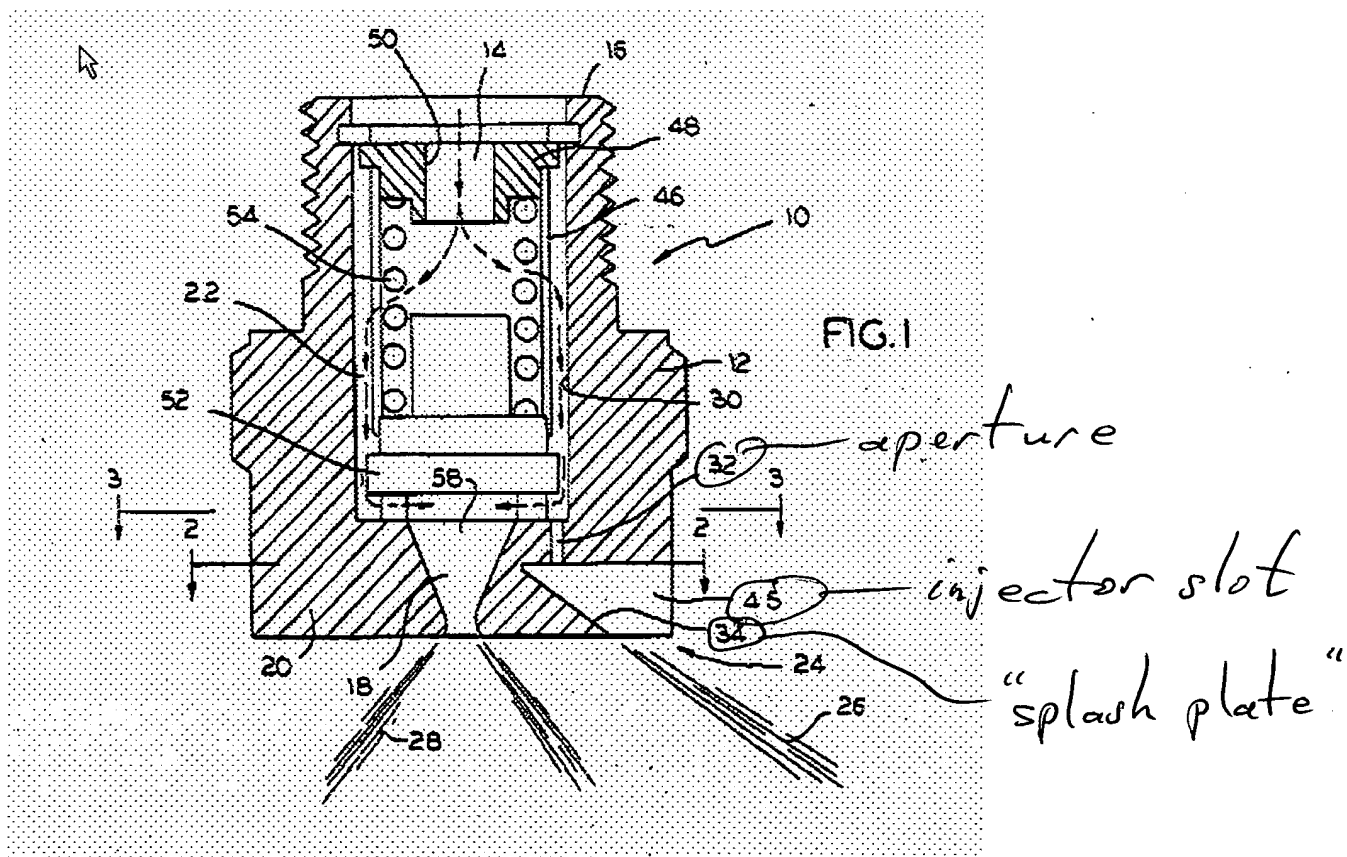
and do not define structurally over the injector of Carlisle. The injector of Carlisle is inherently capable of injecting different fuels.



Claims 12, 13, 15, 16, 17, 22, 23, 24 and 25 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Shekelton et al. in view of Amann. Shekelton et al. disclose the invention substantially as claimed. However, Shekelton et al. do not disclose a preheat section to

Art Unit: 3746

heat the oxidizer. Amann discloses that it is known to use a regenerator 7 to preheat the oxidizer in order to recover energy which would otherwise be wasted. In view of this teaching, it would have been obvious to provide the gas turbine of Shekelton et al. with a recuperator for heating the oxidizer. Figure 1 of Shekelton et al. is reproduced below with the relevant portions labeled with the corresponding claim elements. Regarding claims 23 to 25, these claims merely recite the intended use of the injector and do not define structurally over the injector of Shekelton et al. The injector of Shekelton et al. is inherently capable of injecting different fuels.



Art Unit: 3746

***Allowable Subject Matter***

Claims 14 and 18 to 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Any inquiry relating to patent applications in general should be directed to the Patent Assistance Center at 1-800-786-9199.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kocz, Jr. whose telephone number is 571-272-4830. The examiner can normally be reached on M-Th; 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached at 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Koczo, Jr.  
Primary Examiner  
Art Unit 3746